UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5HR-11-SSI

Thomas Crause, Manager
Hazardous Substances Planning Unit
Illinois Environmental Protection Agency
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

Site Name: Mussell Landfill
Location: Decatur IL
U.S. EPA ID#: ILD980901540
Date: 11/30/90

Dear Mr. Crause:

Attached is a copy of the screening site inspection report (SSIR) which has been prepared for the site listed above. This document is considered to be final and any changes and modifications based on comments made by your agency and the U.S. Environmental Protection Agency (U.S. EPA) during the 30 calendar day comment period have already been incorporated.

Because this is considered to be the final form of this document, this version of the SSIR may be distributed outside of your agency without prior notification and approval of U.S. EPA.

Please remember that the revised estimate of the Hazard Ranking System (HRS) score, which has already been furnished to your agency by FIT is still considered to be predecisional. Therefore, it should not be released. If you have any questions concerning the release of this information, please contact Ms. Jeanne Griffin, of my staff, at (312) 886-3007.

As was previously agreed upon, one set of original photographs for this SSIR has already been sent to your agency enclosed in the draft version of this SSIR. It is your agencies responsibility to see that these photographs are mounted in the photo logs enclosed in the final version of this SSIR. At this point the final version of the SSIR supersedes the draft version and the draft version of this SSIR should be removed from your agency files to ensure that the confidential draft version of this SSIR is not inadvertently released by your staff.

If you have any comments or questions, please contact Bill Messenger at (312) 353-1057.

Sincerely yours,

Thomas F. Geishecker

Thomas F. Geishecker
Technical Support Section
Enclosure
cc: Bill Messenger

SCREENING SITE INSPECTION REPORT
FOR
MURRELL LANDFILL
DECATUR, ILLINOIS
U.S. EPA ID: ILD980901540
SS ID: NONE
TDD: F05-8612-070
PAN: FIL0492SB

NOVEMBER 26, 1990

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

SIGNATURE PAGE
FOR
SCREENING SITE INSPECTION REPORT
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U.S. EPA ID: ILD980901540
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PAN: FIL0492SB

Prepared by: _____ Date: 11/30/90
Jeffrey Taylor
FIT Team Leader
Ecology and Environment, Inc.

Reviewed by: _____ Date: 11/30/90
Timothy Mayens
FIT Unit Manager
Ecology and Environment, Inc.

Approved by: _____ Date: 11/30/90
Jerome D. Oskvarek
FIT Office Manager
Ecology and Environment, Inc.

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Murrell Landfill site under contract number 68-01-7347.

The site was initially discovered in December 1983. The site is believed to have been discovered by the Illinois Environmental Protection Agency (IEPA), but the exact details of its discovery are unknown (Corkill 1990).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Kenneth W. Corkill of IEPA and is dated February 14, 1986 (U.S. EPA 1986).

FIT prepared an SSI work plan for the Murrell Landfill site under technical directive document (TDD) F05-8612-070, issued on April 8, 1988. The SSI work plan was approved by U.S. EPA on December 19, 1989. The SSI of the Murrell Landfill site was conducted on February 21, 1990, under amended TDD F05-8612-070, issued on February 2, 1990.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of six soil/sediment samples and four residential well samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for

> the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and a reconnaissance inspection of the site.

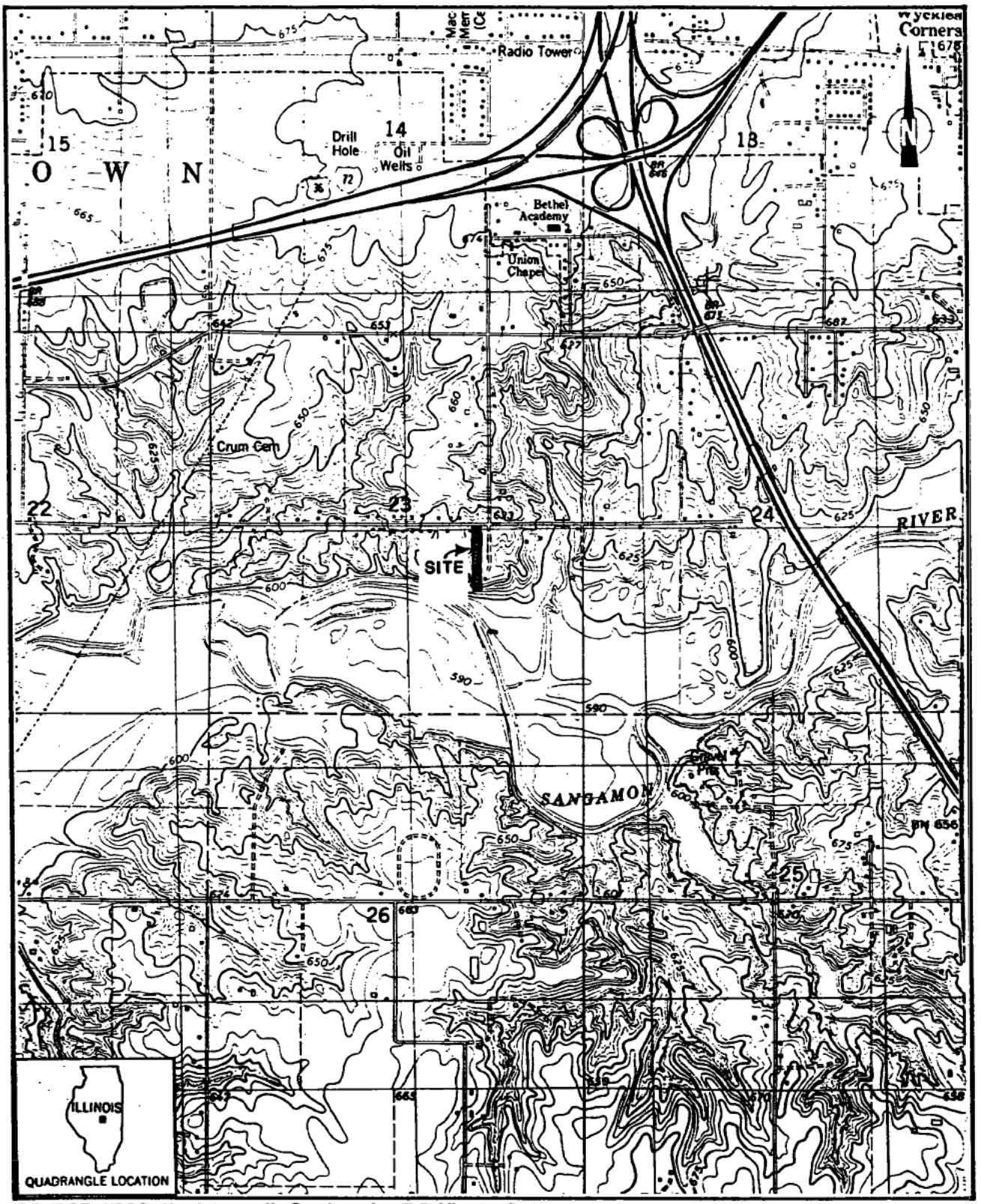
2.2 SITE DESCRIPTION

The Murrell Landfill site is an unlicensed landfill that contains drums of petroleum oils, domestic garbage, scrap metal, concrete, and junked vehicles. Unauthorized dumping still occurs at the site. The site consists of approximately 6 acres located between Hill Road on the north and the Sangamon River on the south, approximately 3 1/2 miles west of Decatur, Macon County, Illinois (NW1/4SE1/4 sec. 23, T.16N., R.1E.) (see Figure 2-1 for site location).

A 4-mile radius map of the Murrell Landfill site is provided in Appendix A.

2.3 SITE HISTORY

The site is currently owned by Rueben Murrell, Sr. Rueben Murrell, Sr., and his sons operate a disposal company called Murrell's Disposal. They use the site to store roll-off boxes, garbage containers, and trucks. The northern half of the site is littered with debris. According to the site representatives, Mrs. Rueben Murrell, Sr., and Rueben Murrell, Jr., the debris was either present when Rueben Murrell, Sr., acquired the site or was dumped on-site at night without their knowledge or approval.



SOURCE: USGS, Harristown, IL Quadrangle, 7.5 Minute Series, 1982.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

According to the Murrells, the garbage they collect as part of their disposal company's operations is deposited in proper landfills, not on-site.

Rueben Murrell, Sr., acquired the site from his brother, Arnold Murrell, in 1962. Arnold Murrell had used the site as a dump for 10 years. It is not known how the site had been used prior to 1952, when the site had been owned by someone named Trottman (Murrell and Murrell 1990).

IEPA files indicate that there were numerous site investigations conducted at the Murrell Landfill site between August 1977 and April 1987. Many violations were noted, principally the operation of a solid waste disposal site without a permit (U.S. EPA 1986). IEPA filed a complaint with the Illinois Pollution Control Board (IPCB) concerning the Murrell Landfill site, and a hearing was held on September 21, 1978. IPCB ordered Rueben Murrell, Sr., to cease and desist all violations, to close the waste site, to cover the site with 2 feet of cover material, to remove all barrels containing liquid waste, to discontinue operating the landfill without proper permits, and to pay a fine of $200 (IPCB 1978). At the time of the SSI interview, the site representatives did not recall any site investigations by IEPA, or any fine levied against them (Murrell and Murrell 1990). It is believed that there is no current enforcement or regulatory action taking place at the Murrell Landfill site (Corkill 1990).

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the Murrell Landfill site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the Murrell Landfill site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Jeff Taylor and Karen Spangler of FIT conducted an interview with Mrs. Rueben Murrell, Sr., and Rueben Murrell, Jr., site representatives for the Murrell Landfill site; Rueben Murrell, Sr., the owner, was unable to attend. The interview took place on-site, in a U.S. EPA vehicle, at 10:00 a.m. on February 21, 1990. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the Murrell Landfill site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began at 11:00 a.m. on February 21, 1990, and included a walk-through of the site to determine appropriate health and safety requirements for conducting

on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was not accompanied by site representatives during the reconnaissance inspection.

Reconnaissance Inspection Observations. The site is a rectangular parcel of land running north-south (see Figure 3-1 for locations of site features). It is bordered on the north by Hill Road and on the south by the Sangamon River. There is a fence on the west and north sides of the site, and on the east side a fence runs approximately one half of the distance from Hill Road to the river. The remaining half of the east side is not fenced, nor is there fencing along the south border of the site. The fence along Hill Road includes a gate to an on-site access road, but the gate is broken and does not close.

A residence is located west of the site. Immediately east of the site, and extending onto the site, is a wooded area. An unnamed intermittent stream runs through a small ravine in the wooded area. The stream crosses the site boundary approximately one half of the way from Hill Road to the Sangamon River, and flows into the river from the site. The stream was flowing at the time of the SSI. Just east of the wooded area is an unpaved drive running south from Hill Road. It curves gradually toward the Murrell Landfill site, terminating near two house trailers east of the site.

The site itself is divided approximately in half. The southern half consisted of the wooded area through which the stream runs. This area appeared to be relatively undisturbed and free of litter. The northern half was a grassy area littered with debris.

At the time of the SSI there were roll-off boxes, tires, barrels, trash bins, scrap metal, auto parts, junked vehicles, domestic garbage, and other equipment scattered throughout the northern half of the site.

An access road runs from Hill Road south to the center of the site, where it ends, forming a loop. In the center of the loop there were five barrels labeled "motor oil." Approximately four rusted barrels were scattered near the loop. East of the access road, near the entrance, stood an abandoned house trailer. The site representatives claimed that they were in the process of disposing of the trailer. A pigpen was also located on-site, south of the abandoned house trailer.

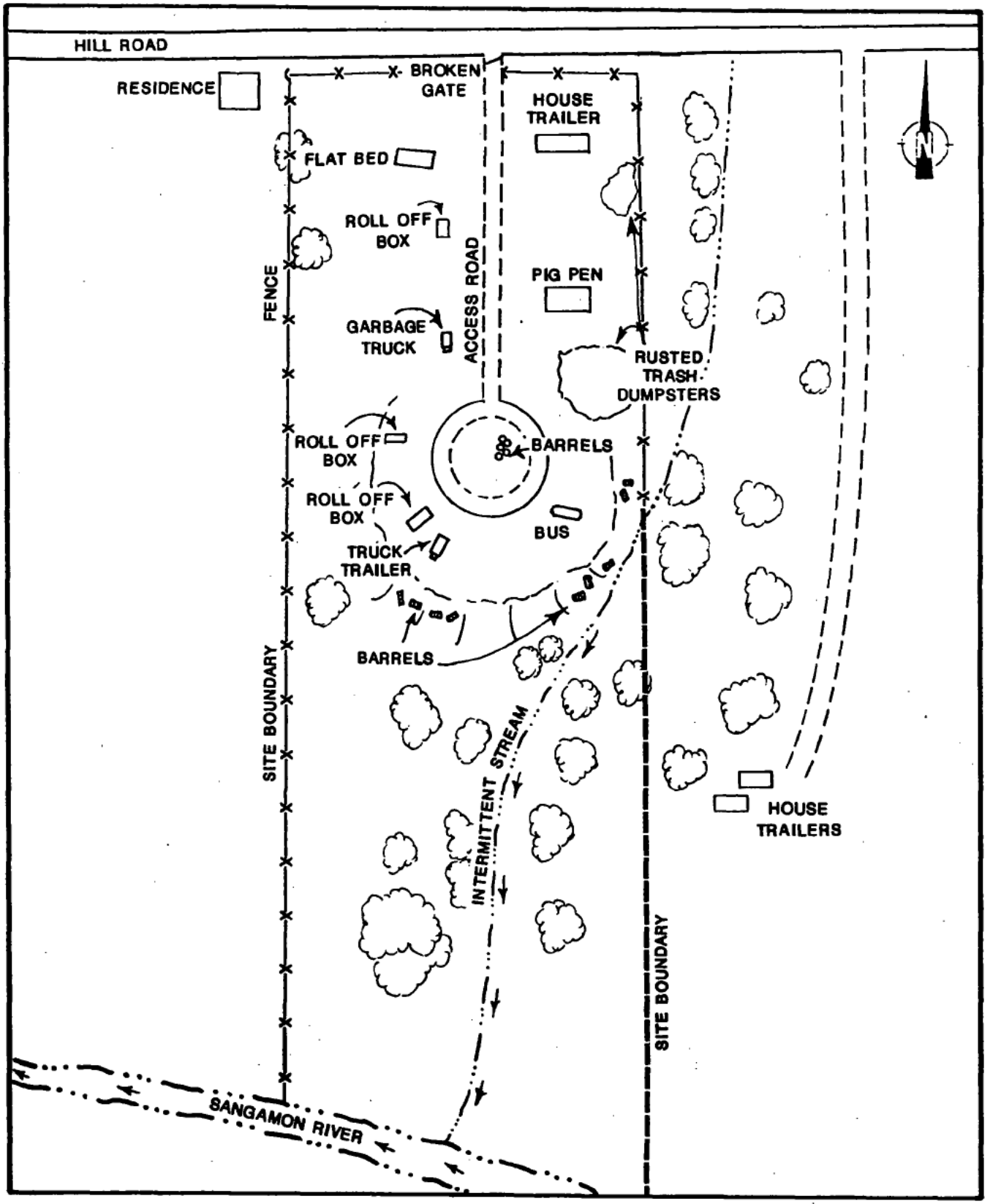


FIGURE 3-1 SITE FEATURES

Enclosed in the pen were approximately six pigs and some chickens. A mule was tied up next to the pen. A steep embankment extends in a horseshoe shape south of the loop. This embankment extends almost the entire width of the site, and rises approximately 15 feet above the stream bed. Protruding from the embankment were numerous rusted barrels, which showed signs of leakage, twisted scrap metal, concrete slabs, and general debris. The stream runs through the site at the east side of the bottom of the embankment.

At the time of the SSI, there were some men hauling away the contents of one of the roll-off boxes. It contained scrap metal and, according to these men, they were taking the scrap metal to Peoria.

Photographs of the Murrell Landfill site are provided in Appendix C.

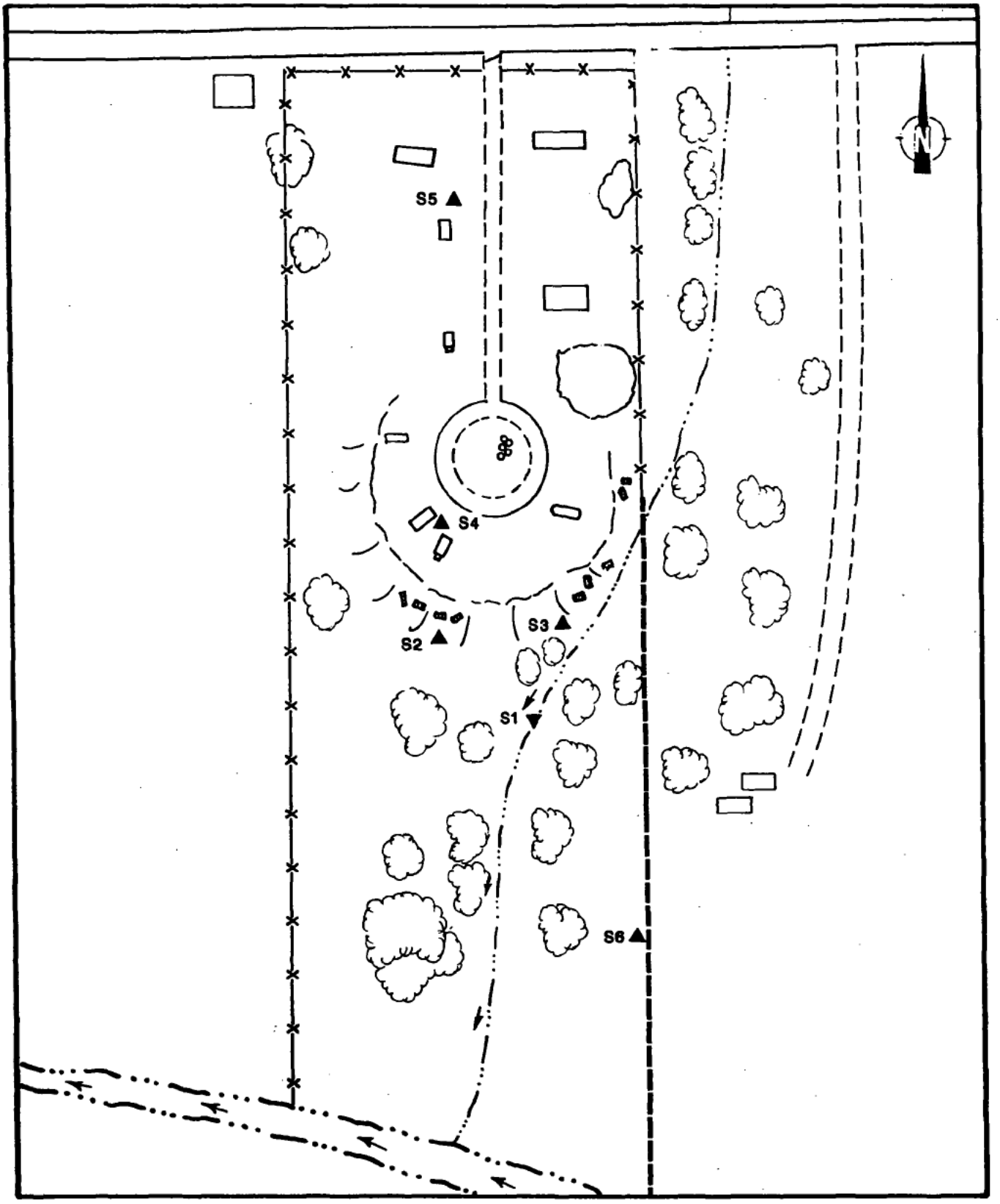
3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On February 21, 1990, FIT collected six soil/sediment samples, including one potential background sample. Portions of the samples were offered to the site representatives, but they were declined. FIT also collected samples from four residential wells in the vicinity of the site.

Soil/Sediment Sampling Procedures. Sample S1 was a sediment grab sample collected from the bed of the intermittent stream near the base of the embankment, approximately 250 feet upstream of the Sangamon River (see Figure 3-2 for soil/sediment sampling locations). The location of S1 was selected to determine whether TCL compounds or TAL analytes were present in the sediment deposited by water flowing from the stream into the Sangamon River.

Soil samples S2 and S3 were collected on the embankment underneath exposed, rusty drums. Sample S2 was a surface grab sample collected on the southwest portion of the embankment. Sample S3, a surface grab sample, was collected from the eastern portion of the embankment. The



SCALE

0 100 200 300 400 FEET

LEGEND

▲ SOIL ▼ SEDIMENT

FIGURE 3-2 SOIL/SEDIMENT SAMPLING LOCATIONS

locations of soil samples S2 and S3 were selected to determine whether TCL compounds or TAL analytes were present in the embankment of the landfill.

Soil sample S4 was a surface grab sample collected from an unvegetated area next to a rusted, overturned barrel near the loop formed by the access road.

Soil sample S5 was a surface grab sample collected from an area of exposed soil on the west side of the access road in the northern portion of the site. Soil samples S4 and S5 were selected to determine whether TCL compounds or TAL analytes were present near the central and northern portions of the site.

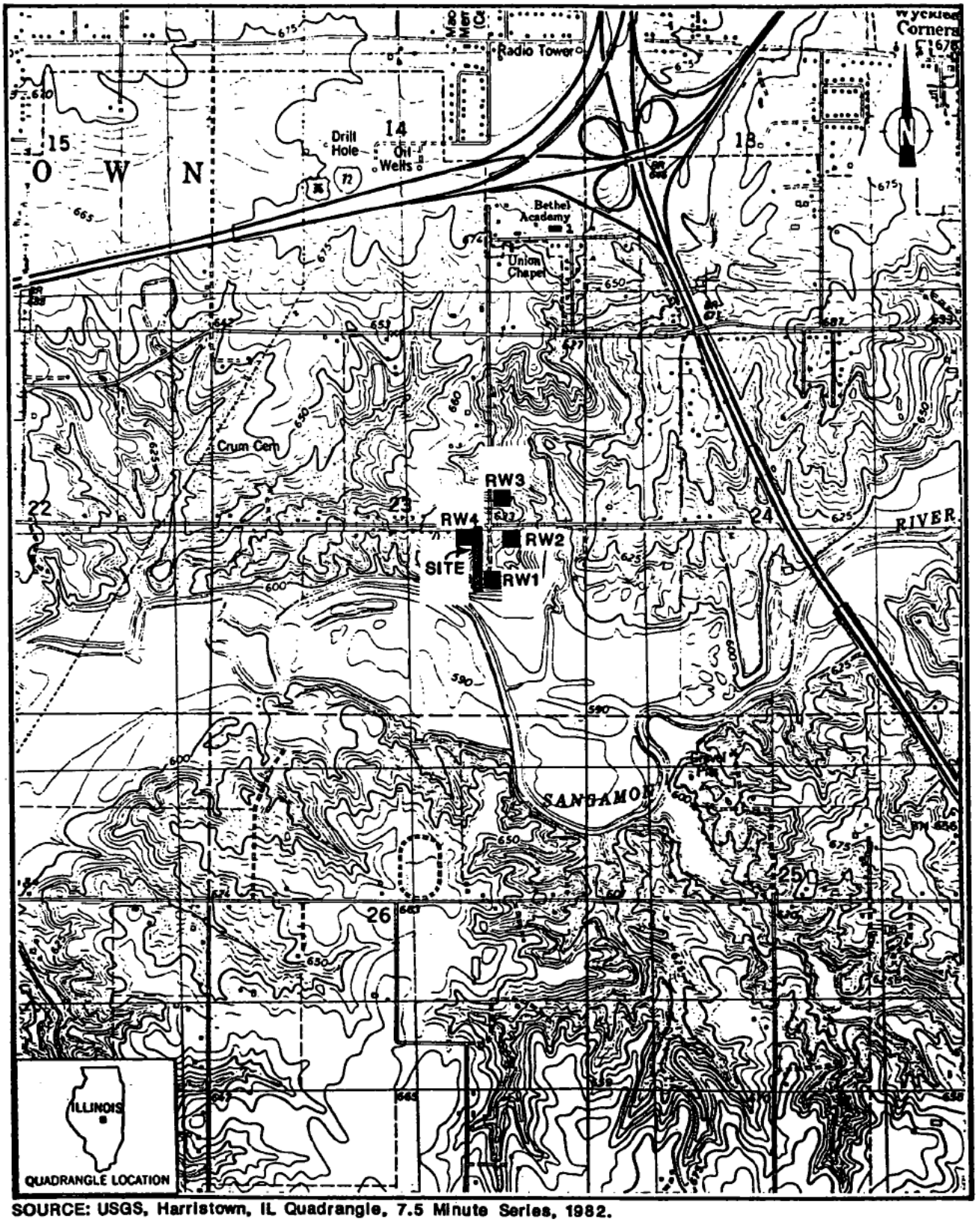
Soil sample S6, a potential background sample, was a surface grab sample collected on-site from the wooded area near the Sangamon River. Sample S6 was collected to determine the representative chemical content of the soil in the area of the site. The location was selected because it appeared to be relatively undisturbed.

All soil samples were collected using a trowel. Samples were placed directly into a stainless steel bowl, debris was removed, and the samples were then transferred directly to sample bottles using the trowel. Sediment sample S1 was collected with a shovel. The sample was transferred directly into a stainless steel bowl, debris was removed, and the sample was then transferred directly to a sample jar using a trowel.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., shovel, trowels, and bowls) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP) for TCL compounds by S-Cubed of San Diego, California, and for TAL analytes by Southwest Laboratories of Oklahoma of Broken Arrow, Oklahoma.

Residential Well Sampling Procedures. Residential well samples (indicated as RW1, RW2, RW3, and RW4) were collected to determine



SOURCE: USGS, Harristown, IL Quadrangle, 7.5 Minute Series, 1982.

SCALE
0 ½ 1 MILE

FIGURE 3-3 RESIDENTIAL WELL SAMPLING LOCATIONS

whether TCL compounds or TAL analytes had migrated from the site into groundwater in the vicinity of the site. The residential well sampling locations were selected because of their proximity to the site (see Figure 3-3 for residential well sampling locations).

Sample RW1 was collected from a house trailer located immediately to the east of the site, approximately 600 feet south of Hill Road. Sample RW2 was collected from a residence located approximately 600 feet east of the site, at the southeast corner of the intersection of Joynt and Hill roads. Sample RW3 was collected as a potential upgradient sample from a residence located approximately 900 feet northeast of the site. Sample RW4 was collected from a residence located immediately west of the site, approximately 30 feet from the site boundary.

All residential well samples were obtained from outlets that by-passed water treatment systems and storage tanks. Water was allowed to discharge from the outlets for 15 minutes before samples were collected to ensure that the sample sources had been purged of standing water (E & E 1987). In accordance with U.S. EPA quality assurance/quality control requirements, a duplicate residential well sample and a field blank sample were collected. The field blank sample was prepared from distilled water. The duplicate sample was collected at location RW1 (see Table 3-1 for addresses of residential well sampling locations).

As directed by U.S. EPA, all residential well samples were analyzed using the U.S. EPA Central Regional Laboratory (CRL) of Chicago, Illinois, for TCL compounds. The samples were analyzed using the U.S. EPA CLP for TAL analytes by Centec Analytical Services of Salem, Virginia.

Table 3-1

ADDRESSES OF RESIDENTIAL WELL
SAMPLING LOCATIONS*

Sample	Address
RW1 (Duplicate)	RR8, Box 161 Decatur, IL 62522
RW2	RR8, Box 128A Decatur, IL 62522
RW3	RR8, Box 163 Decatur, IL 62522
RW4	RR8, Box 158 Decatur, IL 62522

*Well depths are unknown.

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section presents results of the chemical analysis of FIT-collected soil/sediment samples and residential well samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil/Sediment Samples. Chemical analysis of FIT-collected soil/sediment samples revealed substances from the following groups of TCL compounds and TAL analytes: halogenated hydrocarbons, phthalates, pesticides, heavy metals, metals, common laboratory artifacts, and common soil constituents; cyanide was also detected (see Table 4-1 for complete chemical analysis results of FIT-collected soil/sediment samples).

Residential Well Samples. Chemical analysis of FIT-collected residential well samples revealed substances from the following groups of TCL compounds and TAL analytes: heavy metals and groundwater constituents common to the area of the site (see Table 4-2 for complete chemical analysis results of FIT-collected residential well samples).

Quantitation/detection limits used in the analysis of soil/sediment and residential well samples are provided in Appendix D.

The analytical data for the chemical analysis of soil/sediment and residential well samples collected for this SSI have been reviewed by U.S. EPA and FIT for compliance with terms of the FIT contract, and the

review has been approved by U.S. EPA. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6
Date	2/21/90	2/21/90	2/21/90	2/21/90	2/21/90	2/21/90
Time	1300	1316	1335	1430	1440	1415
CLP Organic Traffic Report Number	EJT72	EJT73	EJT74	EJT75	EJT76	EJT77
CLP Inorganic Traffic Report Number	MEHT30	MEHT31	MEHT32	MEHT33	MEHT34	MEHT35
Compound Detected (values in µg/kg)						
Volatile Organics						
methylene chloride	—	—	75JB	5J	22JB	—
acetone	31J	—	—	—	—	—
1,2-dichloroethene (total)	53	—	—	—	—	—
trichloroethene	7J	—	—	—	—	—
tetrachloroethene	36	14J	13J	—	—	—
toluene	3J	3J	7J	8	3J	—
Semivolatile Organics						
butylbenzylphthalate	—	—	—	1,300	—	—
bis(2-ethylhexyl)phthalate	—	—	—	390J	—	—
Pesticides/PCBs						
Endosulfan I	—	42R	—	—	—	—
4,4'-DDE	—	21R	—	41	—	—
4,4'-DDD	—	—	—	18J	—	—
4,4'-DDT	—	—	—	69	—	—
alpha Chlordane	—	130R	390R	—	—	—
gamma Chlordane	—	130R	320R	—	—	—

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6
Analyte Detected (values in mg/kg)						
aluminum	4,090JE	6,740JE	3,870JE	6,150JE	12,600JE	5,610JE
arsenic	6.1	5.7	4.4	9.6	12.2	1.6B
barium	78.3	67.3	88.2	139	231	72.3
beryllium	0.37B	0.41B	—	0.65B	1.5	0.47B
cadmium	—	—	—	14.1	—	—
calcium	10,700JE	1,490JE	9,810JE	29.5JEB	171,000JE	1,740JE
chromium	7.2J*	9.1J*	17.8J*	60.4J*	16.8J*	8.6J*
cobalt	7.1B	8.8B	3.3B	7.6B	6.1B	3.7B
copper	55.1JN*	26.8JN*	76.2JN*	465JN*	33.2JN*	17.6JN*
iron	10,100JE*	11,700JE*	56,300JE*	86,600JE*	14,700JE*	6,980JE*
lead	26.9	33.2	192	251	53.5	23.8
magnesium	3,930	1,680	2,190	2,190	4,090	1,180B
manganese	980JE*	662JE*	655JE*	886JE*	568JE*	557JE*
mercury	—	—	0.23	—	2.2	—
nickel	12.2	10.7	27.9	174	15.6	8.0B
potassium	813B	887B	1,140B	912B	1,750	613B
selenium	0.92B	—	—	—	8.95	0.59B
sodium	194B	143JB	276B	232B	654B	114JB
vanadium	13.8B	17.4	8.7B	12.9	29.3	14.3
zinc	87.1	60.8	458	1,756	160	52.1
cyanide	—	—	24.6	—	—	—

— Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
B	This flag is used when the compound is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semiquantitative if it is <5x the blank concentration (<10x the blank concentrations for common laboratory artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semiquantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED RESIDENTIAL WELL SAMPLES

Sample Collection Information and Parameters	Sample Number RW1	Duplicate	RW2	RW3	RW4	Blank
Date	2/21/90	2/21/90	2/21/90	2/21/90	2/21/90	2/21/90
Time	0920	0920	1505	0910	0930	1030
CRL Log Number	90FT09S18	90FT09D18	90FT09S19	90FT09S20	90FT09S21	90FT01R98
CLP Inorganic Traffic Report Number	MEHT36	MEHT37	MEHT38	MEHT39	MEHT40	MEHT41
Temperature (°C)	11	11	12	12	11	10
Specific Conductivity (μmhos/cm)	600	600	410	675	560	0
pH	6.4	6.4	7.42	6.46	6.3	5.1
Compound Detected (values in μg/L)						
Analyte Detected (values in μg/L)						
aluminum	—	43.6B	34.6B	—	—	—
arsenic	—	—	—	—	8.1	—
barium	85.7	86.8	114	68.8	145	—
cadmium	—	—	0.16B	0.33JB	—	0.11JB
calcium	132,000	132,000	127,000	135,000	131,000	—
copper	—	—	12.3	—	—	—
iron	118	113	2,300	386	1,200	—
magnesium	56,500	57,000	62,900	73,100	69,300	—
manganese	72.9	72	123	107	170	—
potassium	2,090J	2,290J	1,880JB	2,180J	3,160	—
sodium	16,500	16,700	17,800	26,900	28,500	140B
zinc	57.8	73	18.8B	142	122	—

— Not detected.

Table 4-2 (Cont.)

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the Murrell Landfill site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Analysis of residential well samples collected for the SSI of the Murrell Landfill site detected no TCL compounds. TAL analytes were detected, but cannot be attributed to the site. The TAL analytes detected were either groundwater constituents common to the area of the site or were detected in concentrations similar to those found in the upgradient residential well sample.

However, a potential exists for TCL compounds and TAL analytes detected in on-site soil/sediment samples to migrate from the site to groundwater in the vicinity of the site based on the following information. The following TCL compounds and TAL analytes were detected in on-site surface soil/sediment samples: 1,2-dichloroethene at 53 µg/kg in S1, tetrachloroethene at 36 µg/kg in S1, 4,4'-DDE at 41 µg/kg in S4, 4,4'-DDT at 69 µg/kg in S4, cadmium at 14.1 mg/kg in S4, mercury at 2.2 mg/kg in S5, and cyanide at 24.6 mg/kg in S3. These TCL compounds and TAL analytes were not detected in the background soil sample.

The potential for TCL compounds and TAL analytes detected in soil/sediment samples to migrate to groundwater is also based on the following geological, topographical, and hydrological information. A review of geological literature and logs of wells in the area surrounding the Murrell Landfill site revealed unconsolidated Pleistocene-age glacial deposits lying upon Pennsylvanian-age bedrock consisting of limestone, shale, and sandstone (Student et al. 1981). The Pleistocene-age deposits consist of stratified clay, gravel, and sand varying in depth from 100 to 200 feet (Student et al. 1981; Kempton, Morse, and Visocky 1982). Most of the private wells in the area of the site are finished in depths from 23 to 187 feet. Because it appears that most, if not all, of the private wells in the area of the site are finished in the glacial aquifer, the glacial aquifer therefore constitutes the aquifer of concern (AOC).

Regional groundwater flow in the area of the site would appear to follow the topography of the area, and flow to the south toward the Sangamon River. Because no municipal water system services the area, the population potentially affected by the migration of TCL compounds and TAL analytes into groundwater in the area of the Murrell Landfill site consists of those residents drawing from private wells. The town of Harristown has a municipal well, but it is located outside a 3-mile radius of the site (Vest 1988). The city of Decatur is supplied by surface water from Lake Decatur, which is also located outside the 3-mile radius (Mayhugh 1989).

Using United States Geological Survey (USGS) maps, 150 homes with private wells were counted within the 3-mile radius of the site (USGS 1967, 1982, 1982a). Multiplying this figure by a persons-per-household average of 2.67 for Macon County, Illinois (U.S. Bureau of Census 1982), the target population of groundwater contamination is approximately 400 persons.

5.3 SURFACE WATER

The southern border of the Murrell Landfill site is formed by the Sangamon River. There are no surface water intakes located within 3 miles downstream of the site; however, the river is used for recreational purposes (Illinois Travel and Recreation Guide 1983). FIT

observed a small, intermittent stream flowing through the site and into the Sangamon River. A high potential does exist for the migration of TCL compounds and TAL analytes off-site via surface water, based on the following information.

- TCL compounds and TAL analytes have been detected in on-site soil/sediment samples in concentrations above those of the background sample.

- The stream running through the site leads into the Sangamon River.

- The embankment on-site causes runoff to flow toward the stream and toward the Sangamon River.

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the Murrell Landfill site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, combination oxygen meter/explosimeter, radiation meter, colorimetric monitoring tubes for cyanide) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates because TCL compounds and TAL analytes were detected in on-site soil/sediment samples, and because exposed areas (e.g., soil sampling locations S4 and S5) are susceptible to disturbance by the air.

The population within a 4-mile radius of the site potentially affected by a release of TCL compounds and TAL analytes to the air is approximately 10,400 persons. This population was calculated by counting houses on USGS topographic maps within a 4-mile radius of the site (USGS 1967, 1982, 1982a) and multiplying this number by a persons-per-household value of 2.67 (U.S. Bureau of the Census 1982).

5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed by FIT, and an interview with site representatives Mrs. Rueben Murrell, Sr., and Rueben Murrell, Jr., no documentation exists of an incident of fire or explosion at the site. According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI. According to the fire chief of the Harristown Fire Department, the Murrell Landfill site does not pose a threat of fire or explosion (Gambrill 1990).

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the Murrell Landfill site have been documented.

However, a potential exists for the public to come into direct contact with TCL compounds or TAL analytes detected on-site. This potential is based on the following information.

- TCL compounds and TAL analytes were detected in on-site soil/sediment samples.

- The site is not entirely fenced, and the gate to the on-site access road is broken.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site is 300 persons. This population was calculated by counting houses on USGS topographic maps within a 1-mile radius of the site (USGS 1967, 1982, 1982a) and multiplying this number by a persons-per-household value of 2.67 (U.S. Bureau of the Census 1982).

6. REFERENCES

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5268:8

APPENDIX A

SITE 4-MILE RADIUS MAP

HARRISTOWN MUNICIPAL WATER BOUNDARY

DECATUR MUNICIPAL WATER BOUNDARY

WELL LOG 1

WELL LOG 2

WELL LOG 3

WELL LOG 4

WELL LOG 5

WELL LOG 6 K SPRINGS CENTER

WELL LOG 7 RIVER

WELL LOG 8

SITE

Murrell LF

ecology and environment, inc.

SITE NAME ... MURRELL LANDFILL

U.S. EPA ID#... (ILD980990154)

CONTOUR INTERVAL 5 FEET

USGS TOPOGRAPHIC MAPS:

NAME ... WARRENSBURG	NAME ... DECATUR	
DATE ... 1982	DATE ... 1967	
REVISED ...	REVISED ... 1975	
NAME ... HARRISTOWN	NAME ...	
DATE ... 1982	DATE ...	
REVISED ...	REVISED ...	

SCALE 0 ½ 1 MILE

QUADRANGLE LOCATION

1 170 000 FEET

1 130 000

280 000 FEET

APPENDIX B

U.S. EPA FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D980901540

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Murrell Landfill	Joynt and Hill rds

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Decatur	IL	62522	Macon	115	IL-22

09 COORDINATES LATITUDE	LONGITUDE
39 49 00.0	089 03 30.0

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
2, 21, 90 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	~1952 (BEGINNING YEAR) / Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR Ecology + Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Jeffrey Taylor	Biologist	Ecology + Environment, Inc	(312) 663-9415
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Karen Spangler	Environmental Engineer	Ecology + Environment, Inc	(312) 663-9415
Jeff Dickson	Geologist	Ecology + Environment Inc	(312) 663-9415
Tim Mayers	Geographer	Ecology + Environment, Inc	(312) 663-9415
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Mrs. Ruben Murrell Sr.	owner	RR #8 Box 153	(217) 963-2469
Mr. Ruben Murrell Jr.	owner	RR #8 Box 153	(217) 963-2469
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	10:00	Sunny Clear Mid 40's

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Tom Crause	Illinois Environmental Protection Agency (IEPA)	(217) 782-9846

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Jeffrey Taylor	U.S. EPA/FIT	Ecology + Environment	(312) 663-9415	4, 19, 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980990540

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ■ A. SOLID
- ☐ B. POWDER, FINES
- ■ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ■ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

- TONS Unknown
- CUBIC YARDS Unknown
- NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ■ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown	Unknown	See site history in the narrative for more information.
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	See Table 4-1 in narrative for complete analytical results of on-site soil samples collected by FIT 2/21/90.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and Federal file information

Analytical data results (E+E 1990) (Region V Chicago)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D980901540

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: ~400
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION:

See Section 5-2 of Narrative

01 ■ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 5-3 of Narrative

01 ■ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: ~10,400
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 5-4 of Narrative

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 5-5 of Narrative

01 ■ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: ~300
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 5-6 of Narrative

01 ■ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: ~6 (Acres)
02 ■ OBSERVED (DATE: 2/21/90) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Table 4-1 Analytical Summary

01 ■ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: ~400
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 5-2 of Narrative

01 ■ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: ~4
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Site used by Morrell Disposal to store their trucks and dumpsters

01 ■ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: ~10,400
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

See Section 6 of Narrative

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980901540

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A Potential Exists because of TCL compounds and TAL analytes were detected in on-site soil samples.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)
A Potential Exists because of TCL compounds and TAL analytes were detected in on-site soil samples. A Pig farm was observed onsite containing Pigs and Chickens

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A Potential exists for food chain contamination if people consume affected flora and fauna.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 2/21/90) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ~10,400
04 NARRATIVE DESCRIPTION
TCL compounds and TAL analytes were detected in on-site Soil Samples. FIT observed rusty drums which showed signs of leakage.

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Due to the proximity of the site to the Sangamon river, a Potential for damage to off-site property exists if contaminants migrate of site via surface water pathway.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ■ ALLEGED
04 NARRATIVE DESCRIPTION
Site represenatives claim debris is dumped at night without their knowledge or permission. File information indicates Murrell has used the site as a dump as early as 1978.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: ~10,400

IV. COMMENTS

This information was gathered through the interview with the site representatives, a review of the file information, and FIT site investigation.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Investigation by FIT (1990) (Region II, Chicago)
FIT File info.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D9EC901540

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	Unknown	
☐ G. LANDFARM		
☒ H. OPEN DUMP	Unknown	
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify) NONE

05 OTHER

- ☐ A. BUILDINGS ON SITE

N/A

06 AREA OF SITE

~6 (Acres)

07 COMMENTS An embankment Exists with rusted drums, concrete slabs, and Twisted metal Exposed out of the side of the embankment

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Rusted drums were observed sticking out of the side of the embankment at various locations.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS The area is not completely fenced and the Front gate is broken down. As for the waste itself, the entire site is littered with debris and many drums showed signs of weathering and Leakage

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

FIT File information

Site investigation conducted by FIT (1990)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D980901540

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ■	B. ■	A. ☐	B. ☐	C. ■	A. >3 (mi)
NON-COMMUNITY	C. ☐	D. ■	Unknown D. ☐	E. ☐	F. ☐	B. ~50 ft (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
~400	50 ft (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
~23 (ft)	South	~23 (ft)	Unknown (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Private Residential Wells

10 RECHARGE AREA		11 DISCHARGE AREA	
■ YES ☐ NO	COMMENTS: Recharge to aquifer through Precipitation	■ YES ☐ NO	COMMENTS: Possibly in to Sangamon River

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Sangamon River	☐	Southern Border (mi)
Intermittent Stream on-site	☐	on-site (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. ~300 NO. OF PERSONS	B. ~1300 NO. OF PERSONS	C. ~1900 NO. OF PERSONS	~40 ft (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
~486	~40 ft (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The area surrounding the site is a rural residential area not serviced by municipal water. The town of Harristown is located approximately 1 ½ miles to the north.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D980901540

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
~ 100 - 200 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
~ 2 (in)	~ 2.7 (in)	0-5 %	South	0-5 %

09 FLOOD POTENTIAL: Unknown
SITE IS IN _____ YEAR FLOODPLAIN

10: N/A ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. N/A (mi)	B. 7 3 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

>1 (mi)

ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. ~3 (mi)	B. ~50' (mi)	C. ~1 (mi)	D. ~1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT File information
Site inspection (1990) FIT

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980901540

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO		03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	TCL Compounds USEPA Central Regional Lab Chicago, IL	TAL Analytes Centec Analytical Services Salem, VA.	On file
SURFACE WATER				
WASTE				
AIR				
RUNOFF				
SPILL		TCL Compounds S-Cubed	TAL Analytes Southwest Labs of	
SOIL	6	of San Diego, CA.	Oklahoma Broken Arrow, Ok.	on file
VEGETATION				
OTHER				

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	No readings above background
Radiation alert	
Combometer	
HCN Dräger tube	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology + Environment Inc
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Ecology + Environment, Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

pH, Conductivity, and Temperature of Residential Wells

See table 4.2

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Site inspection conducted 2/21/90

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980901540

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Ruben Murrell Sr.		RR #8 Box 153		Decatur	IL	62522
N/A						
N/A						
N/A						

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
N/A						
N/A						
N/A						
N/A						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Arnold Murrell		Unknown				
N/A						
N/A						

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						
N/A						
N/A						

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Files
FIT Site investigation (1990)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980901540

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Ruben Murrell Sr	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
RR 5 Box 153	

05 CITY	06 STATE	07 ZIP CODE
Decatur	IL	62522

08 YEARS OF OPERATION	09 NAME OF OWNER
1962 - Present	Ruben Murrell Sr

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Files

FIT Site investigation

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D980901540

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Files
FIT Site investigation

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D 980 901 540

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D 980901540

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Files

FIT Site investigation

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
ILD	9E0901540

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

See section 2.3 of Narrative

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

FIT Files

FIT Site inspection

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 1 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL04925B

DATE: > 2/21/90

TIME: > 920

DIRECTION OF PHOTOGRAPH:
> West

WEATHER CONDITIONS:
> Sunny Clear
> mid 40's

PHOTOGRAPHED BY:
> T Mayers

SAMPLE ID (if applicable):
> RW1

DESCRIPTION: > RW 1 Close up
>

DATE: > 2/21/90

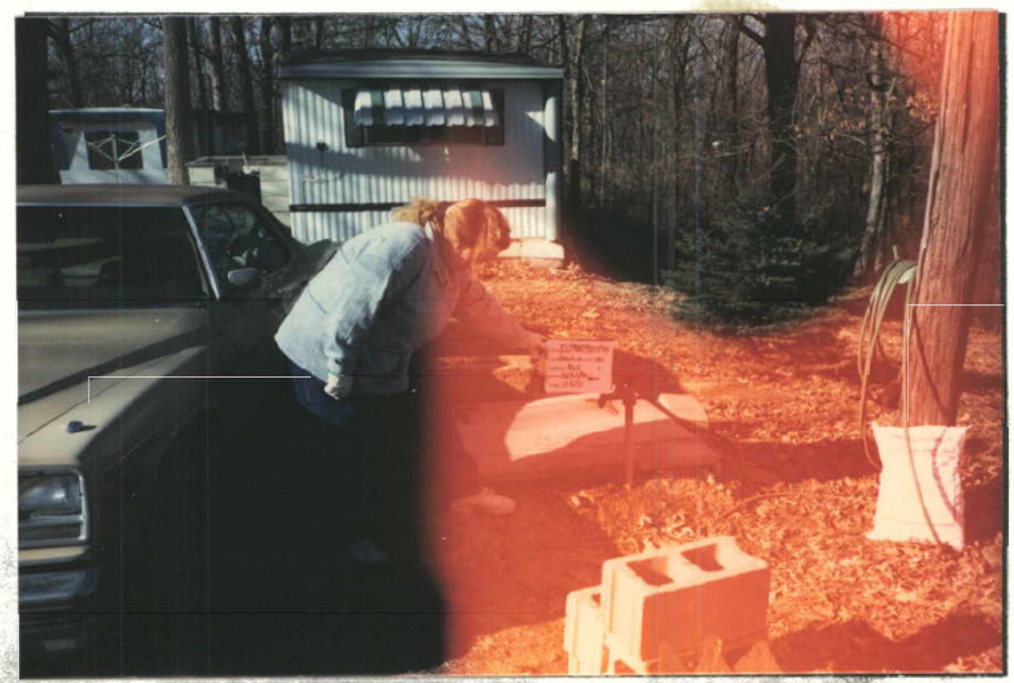
TIME: > 920

DIRECTION OF PHOTOGRAPH:
> West

WEATHER CONDITIONS:
> Sunny clear
> mid 40's

PHOTOGRAPHED BY:
> T. Mayers

SAMPLE ID (if applicable):
> RW1



DESCRIPTION: > RW 1 Perspective
> Collected from a residance east of the site

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 2 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 15 05

DIRECTION OF PHOTOGRAPH: > South

WEATHER CONDITIONS: > Sunny Clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): > RW2

DESCRIPTION: > RW 2 Close UP

>

DATE: > 2/21/90

TIME: > 15:05

DIRECTION OF PHOTOGRAPH: > South

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): > RW2

DESCRIPTION: > RW2 Perspective

> Collected from a residence located east of the site

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Morrell Landfill PAGE 3 OF 20

U.S. EPA ID: ILD980901540 TDD: F05-8612-070 PAN: FIL0492SB

DATE: 2/21/90

TIME: 09:10

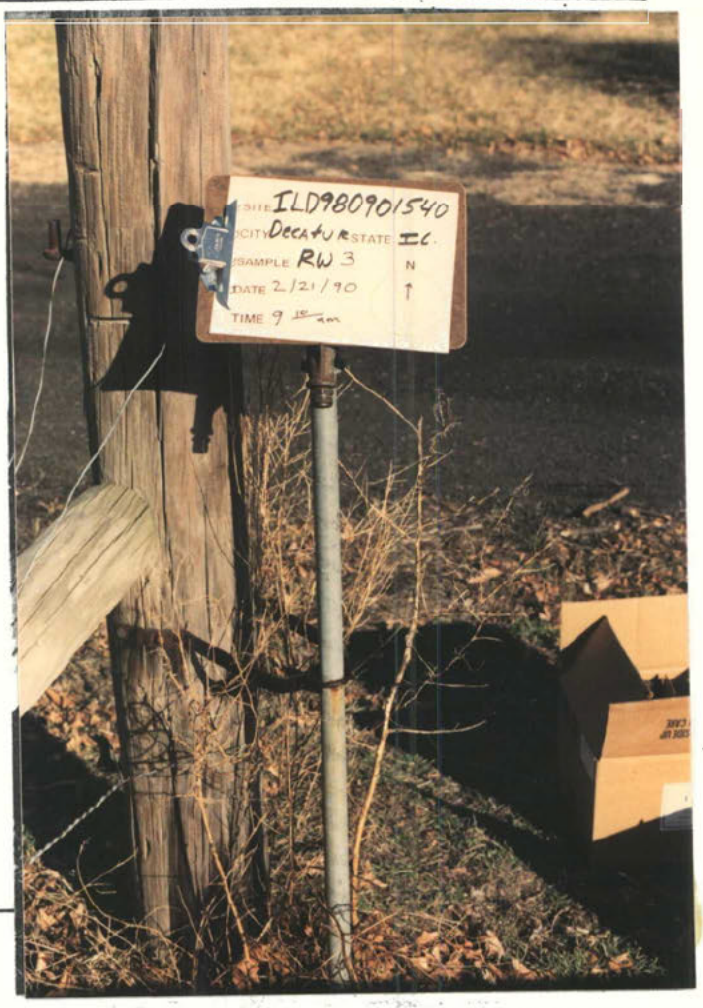
DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny clear · 40's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): RW3

DESCRIPTION: RW3 close-up



DATE: 2/21/90

TIME: 0910

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny clear

40's

PHOTOGRAPHED BY: J Dickson

SAMPLE ID (if applicable): RW3

DESCRIPTION: RW3 Perspective collected from a residance northeast of the site

SI010(2/25/89)

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 4 OF 20

U.S. EPA ID: ILD980901540 TDD: F05-8612-070 PAN: FIL04925B

DATE: 2/21/90

TIME: 0930

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny, clear, 40's

PHOTOGRAPHED BY: J Dickson

SAMPLE ID (if applicable): RW4

DESCRIPTION: RW 4

Closeup

DATE: 2/21/90

TIME: 0930

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Sunny Clear 40's

PHOTOGRAPHED BY: J Dickson

SAMPLE ID (if applicable): RW4

DESCRIPTION: RW4

Perspective Residence located 60 feet from the Site to the west

SI010(2/25/89)

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 5 OF 20

U.S. EPA ID: ILD980501340 TDD: F05-8612-070 PAN: FIL04925B

DATE: 2/21/90

TIME: 1300

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Sunny Clear 40's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S1

DESCRIPTION: S1 Close up Sediment collected from on-site unnamed stream

DATE: 2/21/90

TIME: 1300

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Sunny, Clear, 40's

PHOTOGRAPHED BY: J. Dickson

SAMPLE ID (if applicable): S1

DESCRIPTION: S1 perspective Showing proximity of the stream to the debris on the slope.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 6 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 13:16

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): > S2

DESCRIPTION: > S2 Close up collected under an exposed drum

>

DATE: > 2/21/90

TIME: > 13:16

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): > S2

DESCRIPTION: >

> S2 Perspective debris exposed out of slope

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 7 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1335

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> J Dickson

SAMPLE ID (if applicable):
> S3

DESCRIPTION: > S3 close up collected under exposed drums

>

DATE: > 2/21/90

TIME: > 1335

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> J Dickson

SAMPLE ID (if applicable):
> S3

DESCRIPTION: > S3 perspective drums exposed out of the

> side of the slope

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 9 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 14.30

DIRECTION OF PHOTOGRAPH: > West

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): > S4

DESCRIPTION: > S4 close up collected next to overturned drum

DATE: > 2/21/90

TIME: > 14:30

DIRECTION OF PHOTOGRAPH: > West

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): > S4

DESCRIPTION: > S4 Perspective house trailer on property

> To the west

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 9 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 14:40

DIRECTION OF PHOTOGRAPH:
> South

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> ~~SS~~ J Dickson

SAMPLE ID (if applicable):
> SS

DESCRIPTION: > SS close up collected from the north area of

> the site

DATE: > 2/21/90

TIME: > 14 40

DIRECTION OF PHOTOGRAPH:
> South

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> J Dickson

SAMPLE ID (if applicable):
> SS

DESCRIPTION: >

> SS Perspective roll off box in background

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 10 OF 20

U.S. EPA ID: ILD980901340 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 14 15

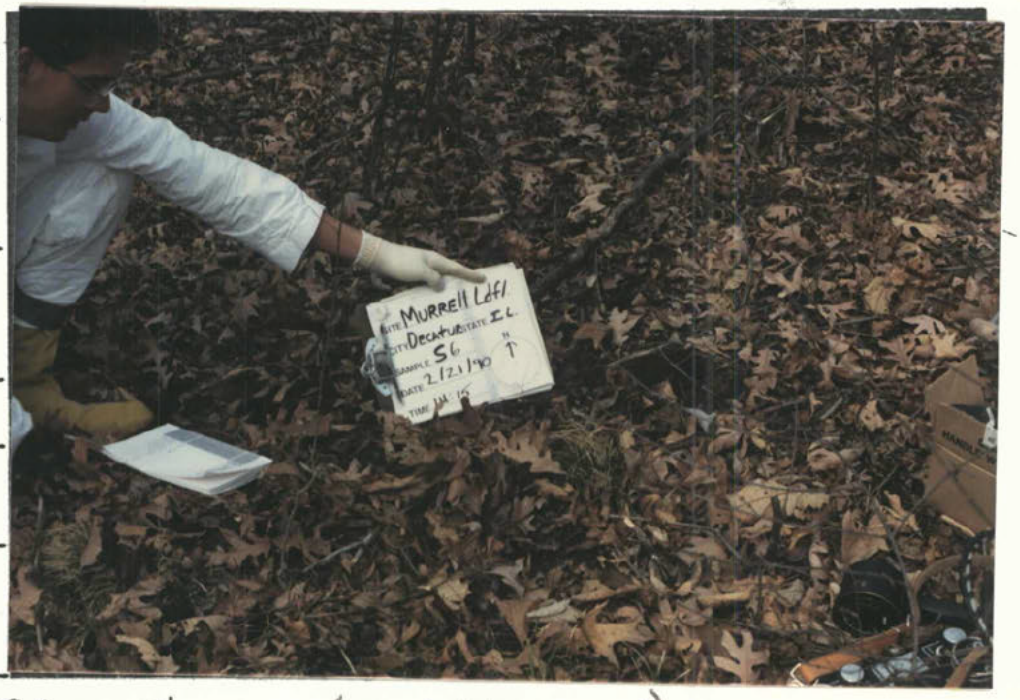
DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): > 56



DESCRIPTION: > 56 Close up (potential background)

>

DATE: > 2/21/90

TIME: > 14 15

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): > 56

DESCRIPTION: > 56 Perspective collected from

> South end of site on the east side of the unnamed Stream

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 11 OF 20

U.S. EPA ID: ILD980901540 TDD: F05-8612-070 PAN: FIL049258

DATE: 2/21/90

TIME: 1300

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Sunny Clear; 40's

PHOTOGRAPHED BY: J Dickson

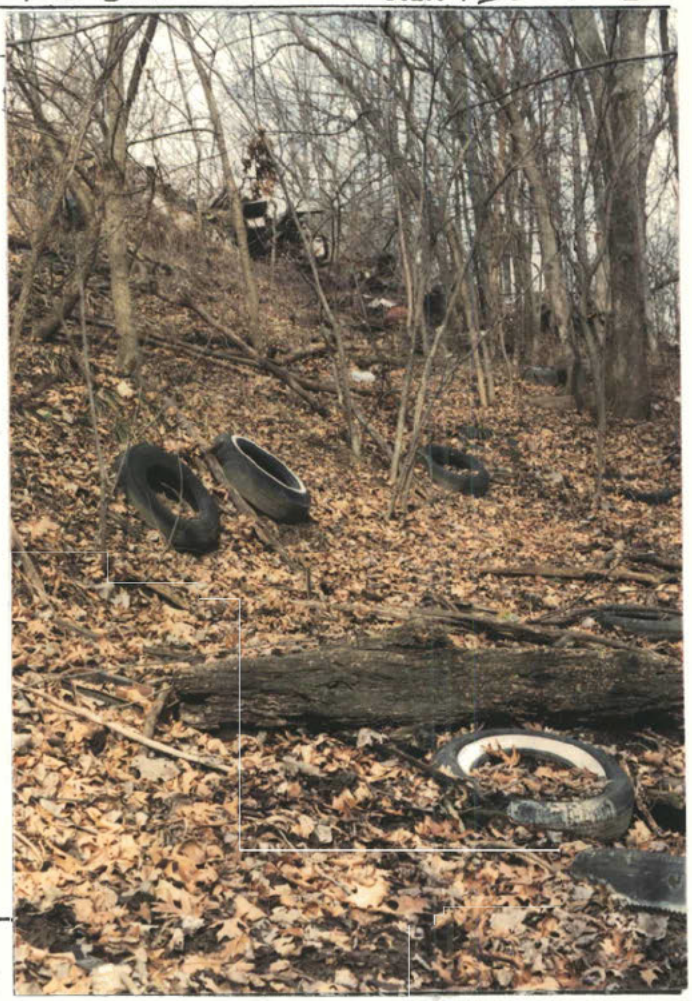
SAMPLE ID (if applicable):

DESCRIPTION:

At S1 looking NE

Tires and other debris sticking

out of the side of the slope



DATE: 2/21/90

TIME: 1300

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Sunny Clear

40's

PHOTOGRAPHED BY: J Dickson

SAMPLE ID (if applicable):

DESCRIPTION:

From S1 looking NW drums and debris sticking out of the slope

SI010(2/25/89)

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 12 OF 20

U.S. EPA ID: ILD980501540 TDD: F05-8612-010 PAN: FIL049258

DATE: 2/21/90

TIME: 1300

DIRECTION OF PHOTOGRAPH: N NW

WEATHER CONDITIONS: Sunny clear mid 40's

PHOTOGRAPHED BY: J Taylor

SAMPLE ID (if applicable):

DESCRIPTION: From intermittent stream near SI looking North at slope of landfill

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 13 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL04925B

DATE: > 2/21/90

TIME: > 1410

DIRECTION OF PHOTOGRAPH: > South

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > Unnamed tributary entering the Sangamon River

> at South Edge of Site boundary

DATE: > 2/21/90

TIME: > 1410

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > From Sangamon River looking north towards

> Landfill

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 14 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1455

DIRECTION OF PHOTOGRAPH: > South Southeast

WEATHER CONDITIONS: > Sunny Clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): >

DESCRIPTION: > from center of site looking South

>

DATE: > 2/21/90

TIME: > 1115

DIRECTION OF PHOTOGRAPH: > West

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > S Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > While conducting the investigation a hauling company

> was removing the contents of a rolloff box. The debris was to be moved to Peoria

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 15 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1455

DIRECTION OF PHOTOGRAPH: > West

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): >

DESCRIPTION: > From center of site looking West

>

DATE: > 2/21/90

TIME: > 1455

DIRECTION OF PHOTOGRAPH: > East

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): >

DESCRIPTION: > From center of site looking east

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Land fill PAGE 16 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1450

DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny Clear
> mid 40's

PHOTOGRAPHED BY:
> J Dickson

SAMPLE ID (if applicable):
>

DESCRIPTION: > From center of site looking East
>

DATE: > 2/21/90

TIME: > 1450

DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny clear
> mid 40's

PHOTOGRAPHED BY:
> J Taylor

SAMPLE ID (if applicable):
>

DESCRIPTION: > From center of site looking east with trash
> dumpsters in background

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 17 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1445

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): >

DESCRIPTION: > From center of site looking North

>

DATE: > 2/21/90

TIME: > 1445

DIRECTION OF PHOTOGRAPH: > North NorthWest

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Taylor

SAMPLE ID (if applicable): >

DESCRIPTION: > From center of site looking North North west.

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 18 OF 20

U.S. EPA ID: ILD980901340 TDD: F05 8612 070 PAN: FIL04925B

DATE: > 2/21/90

TIME: > 16 00

DIRECTION OF PHOTOGRAPH: > W SW

WEATHER CONDITIONS: > Sunny Clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > House trailer and Northeast Portion of Site

>

DATE: > 2/21/90

TIME: > 16 00

DIRECTION OF PHOTOGRAPH: > South

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > From just inside site looking South down on-site

> dirt road

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 19 OF 20

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL04925B

DATE: > 2/21/90

TIME: > 1445

DIRECTION OF PHOTOGRAPH: > North

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > From inside site looking back at entrance

>

DATE: > 2/21/90

TIME: > 14 45

DIRECTION OF PHOTOGRAPH: > N W

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > NW corner of Site and house next door

> which was RW4

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 20 OF 20

U.S. EPA ID: ILD980901340 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1600

DIRECTION OF PHOTOGRAPH: > NE

WEATHER CONDITIONS: > Sunny Clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > NE corner of site From Inside

>

DATE: > 2/21/90

TIME: > 1600

DIRECTION OF PHOTOGRAPH: > ~~WT~~ East

WEATHER CONDITIONS: > Sunny clear

> mid 40's

PHOTOGRAPHED BY: > J. Dickson

SAMPLE ID (if applicable): >

DESCRIPTION: > The NE Portion of the site, down in the ravine is the

> un named tributary

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Murrell Landfill PAGE 21 OF 21

U.S. EPA ID: ILD980901540 TDD: F05 8612 070 PAN: FIL0492SB

DATE: > 2/21/90

TIME: > 1550

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> J Taylor

SAMPLE ID (if applicable):
>

DESCRIPTION: > Coolers open

>

DATE: > 2/21/90

TIME: > 1555

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny clear

> mid 40's

PHOTOGRAPHED BY:
> J Taylor

SAMPLE ID (if applicable):
>

DESCRIPTION: > Coolers closed

>

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

ADDENDUM A

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM

TARGET ANALYTE LIST (TAL)

INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits Water (µg/L)	Detection Limits Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

ADDENDUM B

CENTRAL REGIONAL LABORATORY
DETECTION LIMITS

TABLE B
CENTRAL REGIONAL LABORATORY
VOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIt IN REAGENT WATER
Benzene	71-43-2	1.5 ug/L
Bromodichloromethane	75-27-4	1.5
Bromoform	75-25-2	1.5
Bromomethane	74-83-9	10
Carbon tetrachloride	56-23-5	1.5
Chlorobenzene	108-90-7	1.5
Chloroethane	75-00-3	1.5
2-Chloroethyl vinyl ether	110-75-8	1.5
Chloroform	67-66-3	1.5
Chloromethane	74-87-3	10
Dibromochloromethane	124-48-1	1.5
1,1-dichloroethane	75-34-3	1.5
1,2-dichloroethane	107-06-2	1.5
1,1-dichloroethene	75-35-4	1.5
Total-1,2-dichloroethene	540-59-0	1.5
1,2-dichloropropane	78-87-5	1.5
cis-1,3-dichlopropropene	10061-01-5	2
trans-1,3-dichloropropene	10061-02-6	1
Ethyl benzene	100-41-4	1.5
Methylene chloride*	75-09-2	1
1,1,2,2-tetrachloroethane	79-34-5	1.5
Tetrachloroethene	127-18-4	1.5
Toluene*	108-88-3	1.5
1,1,1-trichloroethane	71-55-6	1.5
1,1,2-trichloroethane	79-00-5	1.5
Trichloroethene	79-01-6	1.5
Vinyl chloride	75-01-4	10
Acrolein	107-02-8	100
Acetone*	67-64-1	75
Acrylonitrile	107-13-1	50
Carbon disulfide	75-15-0	3
2-butanone	78-93-3	(50)
Vinyl acetate	108-05-4	15
4-Methyl-2-Pentanone	108-10-1	(3)
2-Hexanone	519-78-6	(50)
Styrene	100-42-5	1
m-xylene	108-38-3	2
o-xylene**	95-47-6	
p-xylene**	106-42-3	2.5**
Total Xylene	1330-02-7	

* Common Laboratory Solvents.
Blank Limit is 5X Method Detection Limit.
( ) Values in parentheses are estimates.
Actual values are being determined at this time.
** The o-xylene and p-xylene are reported as a total of the two.

TABLE B (cont.)
CRL
SEMIVOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK LIMIT
Aniline	62-53-3	1.5 ug/L	3 ug/L
Bis(2-chloroethyl)ether	111-44-4	1.5	3
Phenol	108-95-2	2	4
2-Chlorophenol	95-57-8	2	4
1,3-Dichlorobenzene	541-73-1	2	4
1,4-Dichlorobenzene	106-46-7	2	4
1,2-Dichlorobenzene	95-50-1	2.5	5
Benzyl alcohol	100-51-6	2	4
Bis(2-chloroisopropyl) ether	39638-32-9	2.5	5
2-Methylphenol	95-48-7	1	2
Hexachloroethane	67-72-1	2	4
N-nitrosodipropylamine	621-64-7	1.5	3
Nitrobenzene	98-95-3	2.5	5
4-Methylphenol	106-44-5	1	2
Isophorone	78-59-1	2.5	5
2-Nitrophenol	88-75-5	2	4
2,4-Dimethylphenol	105-67-9	2	4
Bis(2-chloroethoxy)methane	111-91-1	2.5	5
2,4-Dichlorophenol	120-83-2	2	4
1,2,4-Trichlorobenzene	120-82-1	2	4
Naphthalene	91-20-3	2	4
4-Chloroaniline	106-47-8	2	4
Hexachlorobutadiene	87-68-3	2.5	5
Benzoic acid	65-85-0	(30)	(60)
2-Methylnapthalene	91-57-6	2	4
4-Chloro-3-methylphenol	59-50-7	1.5	3
Hexachlorocyclopentadiene	77-47-4	2	4
2,4,6-Trichlorophenol	88-06-2	1.5	3
2,4,5-Trichlorophenol	95-95-4	1.5	3
2-Chloronapthalene	91-58-7	1.5	3
Acenapthylene	208-96-8	1.5	3
Dimethyl phthalate	131-11-3	1.5	3
2,6-Dinitrotoluene	606-20-2	1	2
Acenaphthene	83-32-9	1.5	3
3-Nitroaniline	99-09-2	2.5	5
Dibenzofuran	132-64-9	1	2
2,4-Dinitrophenol	51-28-5	(15)	(30)
2,4-Dinitrotoluene	121-14-2	1	2
cont.			

TABLE B (Cont.)
CRL
SEMIVOLATILE DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT	BLANK (a) LIMIT
Fluorene	86-73-7	1 ug/L	2 ug/L
4-Nitrophenol	100-02-7	1.5	3
4-Chlorophenyl phenyl ether	7005-72-3	1	2
Diethylphthalate	84-66-2	1	2
4,6-dinitro-2-methylphenol	534-52-1	(15)	(30)
1,2-Diphenylhydrazine	122-66-7	1	2
n-Nitrosodiphenylamine *	86-30-6		
Diphenylamine *	122-39-4	1.5	3
4-Nitroaniline	100-01-6	3	6
4-Bromophenyl-phenylether	101-55-3	1.5	3
Hexachlorobenzene	118-74-1	1.5	3
Pentachlorophenol	87-86-5	2	4
Phenanthrene	85-01-8	1	2
Anthracene	120-12-7	2.5	5
Di-n-butylphthalate	84-74-2	2	4
Fluoranthene	206-44-0	1.5	3
Pyrene	129-00-0	1.5	3
Butylbenzylphthalate	85-68-7	3.5	7
Chrysene **	218-01-9		
Benzo(a)anthracene **	56-55-3	1.5	3
bis(2-Ethylhexyl)phthalate	117-81-7	1	2
Di-n-octyl phthalate	117-84-0	1.5	3
Benzo(b)fluoranthene ***	205-99-2		
Benzo(k)fluoranthene ***	207-08-9	1.5	3
Benzo(a)pyrene	50-32-8	2	4
Indeno(1,2,3-cd)pyrene	193-39-5	3.5	7
Dibenzo(a,h)anthracene	53-70-3	2.5	5
Benzo(g,h,i)perylene	191-24-2	4	8
2-Nitroaniline	88-74-4	1	2

* These two parameters are reported as a total.
** These two parameters are reported as a total.
*** These two parameters are reported as a total.
(a) If the blank limit is exceeded, the sample is reextracted and rerun.
( ) Values in parentheses are estimates.
The actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE B (Cont.)
CRL
PESTICIDE AND PCB DETECTION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	0.005 ug/L
alpha BHC	319-84-6	(0.010)
beta BHC	319-85-7	(0.005)
delta BHC	319-86-8	(0.005)
gama BHC (Lindane)	58-89-9	0.005
Chlordane	57-74-8	(0.020)
4,4'-DDD	72-54-8	(0.020)
4,4'-DDE	72-55-9	(0.005)
4,4'-DDT	50-29-3	0.020
Dieldrin	60-57-1	0.010
Endosulfan I	959-98-8	0.010
Endosulfan II	33213-65-9	0.010
Endosulfan sulfate	1031-07-8	(0.10)
Endrin	72-20-8	0.010
Endrin aldehyde	7421-93-4	(0.030)
Endrin ketone	53494-70-5	(0.030)
Heptachlor	76-44-8	0.030
Heptachlor epoxide	1024-57-3	0.005
4,4'-Methoxychlor	72-43-5	0.020
Toxaphene	8001-35-2	(0.25)
PCB-1242	53469-21-9	(0.10)
PCB-1248	12672-29-6	(0.10)
PCB-1254	11097-69-1	(0.10)
PCB-1260	11096-82-5	(0.10)

( ) Values in parentheses are estimates.
Actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE B (Cont.)
CRL
INORGANIC DETECTION LIMITS

COMPOUND	PROCEDURE	DETECTION LIMITS	RANGE	UNITS
Aluminum	ICP	100	80 to 1,000,000	ug/L
Antimony	Furnace	2	2 to 30	ug/L
Arsenic	Furnace	2	2 to 30	ug/L
Barium	ICP	50	6 to 20,000	ug/L
Beryllium	ICP	5	1 to 20,000	ug/L
Boron	ICP	80	80 to 20,000	ug/L
Cadmium	ICP	10	10 to 20,000	ug/L
Cadmium	Furnace	0.2	0.2 to 2	ug/L
calcium	ICP	1000	0.5 to 1,000	mg/L
Chromium	ICP	10	8 to 20,000	ug/L
Cobalt	ICP	10	6 to 20,000	ug/L
Copper	ICP	10	6 to 20,000	ug/L
iron	ICP	100	80 to 1,000,000	ug/L
Lead	Furnace	2	2 to 30	ug/L
Lead	ICP	70	70 to 20,000	ug/L
Lithium	ICP	10	10 to 20,000	ug/L
Magnesium	ICP	1000	0.1 to 200	mg/L
Maganese	ICP	10	5 to 20,000	ug/L
Mercury	Cold vapor	0.2	0.1 to 2	ug/L
Molybdenum	ICP	15	15 to 20,000	ug/L
Nickel	ICP	20	15 to 20,000	ug/L
Potassium	ICP	2000	5 to 1,000	mg/L
Selenium	Furnace	2	2 to 30	ug/L
Silver	ICP	5	6 to 10,000	ug/L
Sodium	ICP	1000	1 to 1,000	mg/L
Strontium	ICP	10	10 to 20,000	ug/L
Sulfide	Titration	1	< 1	mg/L
Sulfide	Color	0.05	< 1	mg/L
Thallium	Furnace	2	2 to 30	ug/L
Titanium	ICP	25	25 TO 20,000	UG/L
Tin	ICP	40	40 to 20,000	ug/L
Vanadium	ICP	10	5 to 20,000	ug/L
Yttrium	ICP	5	5 to 20,000	ug/L
Zinc	ICP	20	40 to 1,000,000	ug/L
Cyanide	AA	5.0	8 to 200	ug/L

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for lov level detection limits for drinking vater.

See inorganic Routine Analytical Services for related CAS #.

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

41

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored X. Hole Diam. 43 in. Depth 30 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift X. In Rock ____.
   Tubular ____. Gravel Packed X.
   d. Grout:

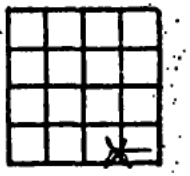
(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 7 Ft. — Seepage Tile Field ____
   Cess Pool ____ — Sewer (non Cast iron) ____
   Privy ____ — Sewer (Cast iron) ____
   Septic Tank ____ — Barnyard ____
   Leaching Pit ____ — Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed 5-78
5. Permanent Pump Installed? Yes ____ Date ____ No ____
   Manufacturer ____ Type ____ Location ____
   Capacity ____ gpm. Depth of Setting ____ Ft.
6. Well Top Sealed? Yes X No ____ Type ____
7. Pitless Adapter Installed? Yes X No ____ 6"
   Manufacturer Baker Model Number ____
   How attached to casing? Bolt
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes ____ No ____
10. Pressure Tank Size ____ gal. Type ____
    Location ____
11. Water Sample Submitted? Yes ____ No ____

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Non - Responsive
    Address [redacted] Non - Responsive
    Driller Leo Costello Jr. License No. 102-15
11. Permit No. 74-24 Date 5-78
12. Water from Sand (Formation) 13. County Macon
    at depth 15 to 25 ft. Sec. 21
    14. Screen: Diam. ____ in. Twp. 16N
    Length: ____ ft. Slot ____ Rge. 1E
    Elev. ____



SHOW LOCATION IN SECTION PLAT
SE SW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PVC	0	10
36"	Concrete	10	30

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	1	1
Sandy Cly	14	15
Sand	10	25
Drift	5	30

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED George C Costello Jr. DATE 5/79

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ___. Bored X. Hole Diam. 43 in. Depth 40 ft.
   Curb material ___. Buried Slab: Yes X No ___
   b. Driven ___. Drive Pipe Diam. ___ in. Depth ___ ft.
   c. Drilled ___. Finished in Drift X. In Rock ___.
   Tubular ___. Gravel Packed X.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ___ Ft. Seepage Tile Field ___
   Cess Pool ___ Sewer (non Cast iron) ___
   Privy ___ Sewer (Cast iron) ___
   Septic Tank ___ Barnyard ___
   Leaching Pit ___ Manure Pile ___
3. Well furnishes water for human consumption? Yes X No ___
4. Date well completed ___
5. Permanent Pump Installed? Yes ___ Date ___ No ___
   Manufacturer ___ Type ___ Location ___
   Capacity ___ gpm. Depth of Setting ___ Ft.
6. Well Top Sealed? Yes X No ___ Type ___
7. Pitless Adapter Installed? Yes X No ___
   Manufacturer Bohn Model Number 6"
   How attached to casing? Bolt
8. Well Disinfected? Yes X No ___
9. Pump and Equipment Disinfected? Yes ___ No ___
10. Pressure Tank Size ___ gal. Type ___
    Location ___
11. Water Sample Submitted? Yes ___ No ___

REMARKS:

IDPH 4.065
1/74 – KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Non - Responsive
    Address [redacted] Non - Responsive
    Driller Dee, Carl License No. 102-15
11. Permit No. 33968 Date 4-74
12. Water from Sandy Clay (Formation) 13. County Macon
    at depth 23 to 25 ft.
14. Screen: Diam. ___ in.
    Length: ___ ft. Slot ___

Sec. 23 3E
Twp. 16N
Rge. 1E
Elev. ___

SHOW LOCATION IN SECTION PLAT
SE SW NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	PVC	0	20
36"	Concrete	20	40

16. Size Hole below casing: ___ in.
17. Static level ___ ft. below casing top which is ___ ft. above ground level. Pumping level ___ ft. when pumping at ___ gpm for ___ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	3	3
Y. clay	14	17
Drift	6	23
Sandy clay	2	25
Drift	15	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Carl Dee DATE 5-74

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO C[illegible]ERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

3

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ___. Bored ✓. Hole Diam. 44 in. Depth 36 ft.
   Curb material Conc. Buried Slab: Yes ✓ No ___
   b. Driven ___. Drive Pipe Diam. ___ in. Depth ___ ft.
   c. Drilled ___. Finished in Drift ___. In Rock ___.
   Tubular ___. Gravel Packed ___.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ___ Ft. Seepage Tile Field ___
   Cess Pool ___ Sewer (non Cast iron) ___
   Privy ___ Sewer (Cast iron) ___
   Septic Tank ___ Barnyard ___
   Leaching Pit ___ Manure Pile ___
3. Well furnishes water for human consumption? Yes ✓ No ___
4. Date well completed 6-25-85
5. Permanent Pump Installed? Yes ___ Date ___ No ✓
   Manufacturer ___ Type ___ Location ___
   Capacity ___ gpm. Depth of Setting ___ Ft.
6. Well Top Sealed? Yes ✓ No ___ Type ___
7. Pitless Adapter Installed? Yes ___ No ✓
   Manufacturer ___ Model Number ___
   How attached to casing? ___
8. Well Disinfected? Yes ___ No ✓
9. Pump and Equipment Disinfected? Yes ___ No ✓
10. Pressure Tank Size ___ gal. Type ___
    Location ___
11. Water Sample Submitted? Yes ___ No ✓

REMARKS:
New const - County # 21866
no bldg yet.

IDPH 4.065

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [illegible] Non - Responsive
    Address [illegible] Non - Responsive
    Driller [illegible] License No. 92-607
11. Permit No. 118784 Date 6-15-85
12. Water from Formation [illegible] 13. County [illegible]
    at depth 20 to 32 ft. Sec. 24.6 Twp. 16N Rge. 1E Elev. ___
14. Screen: Diam. ___ in.
    Length: ___ ft. Slot ___

SHOW LOCATION IN SECTION PLAT
SW NE NW

15. Casing and Liner Pipe

Diam. (In.)	Kind and Weight	From (Ft.)	To (Ft.)
6	plastic		10
36	concrete		36

16. Size Hole below casing: ___ in.
17. Static level ___ ft. below casing top which is ___ ft. above ground level. Pumping level ___ ft. when pumping at ___ gpm for ___ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay		12
Sandy yellow clay		20
gravel & gray clay mix		32
gray clay		36

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED [signature] DATE 6-28-85

White Copy – Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

4 ~~3~~

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored X. Hole Diam. 43 in. Depth 40 ft.
   Curb material ____. Buried Slab: Yes X No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift X. In Rock ____.
   Tubular ____. Gravel Packed X.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 100 Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast Iron) ____
   Privy ____ Sewer (Cast Iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed 9-79
5. Permanent Pump Installed? Yes X Date 9-79 No ____
   Manufacturer F & W Type sub Location well
   Capacity 10 gpm. Depth of Setting 35 Ft.
6. Well Top Sealed? Yes X No ____ Type ____
7. Pitless Adapter Installed? Yes X No ____
   Manufacturer Baker Model Number 6"
   How attached to casing? Bolt
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes X No ____
10. Pressure Tank Size 42 gal. Type galv.
    Location basement
11. Water Sample Submitted? Yes ____ No ____

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Non - Responsive
    Address [redacted] Non - Responsive
    Driller Geo. Cook Jr. License No. 102-15
11. Permit No. 89495 Date 9-79
12. Water from Clay sandy Formation at depth 17 to 18 ft.
13. County Macon
    Sec. 24
    Twp. 16N
    Rge. 1E
    Elev. ____
14. Screen: Diam. ____ in. Length: ____ ft. Slot ____
15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	PVC	0	14
36	Concrete	14	40

SHOW LOCATION IN SECTION PLAT
NE SE SE

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top soil	1	1
Y-clay	7	8
Drift	9	17
Sandy Clay	1	18
Drift	22	40

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED George E. Cook Jr. DATE 9/79

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTION TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

5

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ✓. Hole Diam. 44 in. Depth 56 ft.
      Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
      Tubular ____. Gravel Packed ✓.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast Iron) ____
   Privy ____ Sewer (Cast Iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes ____ No ____
4. Date well completed ____
5. Permanent Pump Installed? Yes ____ Date ____ No ____
   Manufacturer ____ Type ____ Location ____
   Capacity ____ gpm. Depth of Setting ____ Ft.
6. Well Top Sealed? Yes ✓ No ____ Type ____
7. Pitless Adapter Installed? Yes ✓ No ____
   Manufacturer Baker Model Number ____
   How attached to casing? Clamp
8. Well Disinfected? Yes ____ No ____
9. Pump and Equipment Disinfected? Yes ____ No ____
10. Pressure Tank Size ____ gal. Type ____
    Location ____
11. Water Sample Submitted? Yes ____ No ____

REMARKS:

IDPH 4.065
1/74 – KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted]
    Address [redacted]
    Driller [illegible] License No. [illegible]
11. Permit No. 183086 Date 12/22/78
12. Water from Sand & Clay (Formation) 13. County Macon
    at depth 32 to 56 ft. Sec. 24 [illegible]
14. Screen: Diam. ____ in. Twp. 16N
    Length: ____ ft. Slot ____ Rge. 1E
    Elev. ____

SHOW LOCATION IN SECTION PLAT: SE SE NW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
10"	Plastic	+1	-14
36"	Concrete	+14	56

16. Size Hole below casing: ____ in.
17. Static level ____ ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at ____ gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	0-3'	
Yellow Clay	14'	
Clay	28'	
Sand & Clay	32'	
Blue Clay	46'	
Sand-Gravel	49'	
Blue Clay	52'	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

Carl & Reynolds Well Drilling
SIGNED Joseph R. Reynolds DATE 12-26-78
[illegible signature]

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

6

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ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
   Curb material____. Buried Slab: Yes____No____
   b. Driven____. Drive Pipe Diam.____in. Depth____ft.
   c. Drilled X. Finished in Drift X. In Rock____.
   Tubular X. Gravel Packed____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

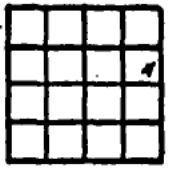
2. Distance to Nearest:
   Building 1000 Ft. Seepage Tile Field____
   Cess Pool____ Sewer (non Cast iron)____
   Privy____ Sewer (Cast iron)____
   Septic Tank 1000 Barnyard____
   Leaching Pit____ Manure Pile____
3. Well furnishes water for human consumption? Yes____No X
4. Date well completed Sept 30-1982
5. Permanent Pump Installed? Yes____Date____No X
   Manufacturer____Type____Location____
   Capacity____gpm. Depth of Setting____Ft.
6. Well Top Sealed? Yes X No____Type____
7. Pitless Adapter Installed? Yes____No X
   Manufacturer____Model Number____
   How attached to casing?____
8. Well Disinfected? Yes____No X
9. Pump and Equipment Disinfected? Yes____No____
10. Pressure Tank Size____gal. Type____
    Location____
11. Water Sample Submitted? Yes____No X

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Sanitary Dist of Decatur

10. Property owner [redacted] Non - Responsive
    Address [redacted] Non - Responsive
    Driller B.E. Mashburn License No. 92-530
11. Permit No. 105134 Date Oct 6-82
12. Water from Sand & Gravel Formation 13. County Macon
    at depth 12 to 38 ft. X Sec. 24 1/2
14. Screen: Diam. 6 in. Twp. 16N
    Length: 8 ft. Slot 12+15 4'+4' Rge. 1E
    Elev.____



15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6"	Plastic	+1	38

SHOW LOCATION IN SECTION PLAT
390's 115'W NE/4
SE SE NE
(industrial)

16. Size Hole below casing: 6 in.
17. Static level 9 ft. below casing top which is 1 ft. above ground level. Pumping level 13 ft. when pumping at 10 GPM for 4 hours. Recovery 30 seconds

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
brown Clay	12	12
Sand & Gravel	26	38

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Bruce Mashburn DATE Jan 28-83

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

7 1/67

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. ____ in. Depth ____ ft.
      Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
      Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field ____
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank ____ Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption? Yes ____ No ____
4. Date well completed 1947
5. Permanent Pump Installed? Yes ____ No ____
   Manufacturer ____ Type ____
   Capacity ____ gpm. Depth of setting ____ ft.
6. Well Top Sealed? Yes ____ No ____
7. Pitless Adaptor Installed? Yes ____ No ____
8. Well Disinfected? Yes ____ No ____
9. Water Sample Submitted? Yes ____ No ____

REMARKS:

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. ____ Year ____
11. Property owner [redacted]
    Address ____
    Driller ____ License No. ____
12. Water from ____ (Formation) at depth ____ to ____ ft.
13. County Macon
    Sec. 24, 4d1
    Twp. 16N
    Rng. 1E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: 21'5" ft. Slot .006

SHOW LOCATION IN SECTION PLAT
3 mi W + 2½ mi S of Decatur

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
10"	surface		21
8	drive		168'3"
casing pulled back to expose screen			

16. Size Hole below casing: ____ in.
17. Static level 10 ft. below casing top which is ____ ft. above ground level. Pumping level ____ ft. when pumping at 40 gpm for ____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Fill	0	5
Yellow clay	5	18
Sand & boulders	18	23
Hard gray clay & gravel	23	35
Yellow clay & sand	35	60
Blue clay	60	65
Blue shale	65	76
Sand, water about 5 gpm	76	81
Blue clay	81	102
Hard gray shale	102	123
Soft green clay	123	146
Soft sandy clay, caves badly	146	163
Hard gray clay	163	168
Extremely fine gray sand water	168	181
Soft gray clay	181	182
Extremely fine gray sand, water	182	185
White shale	185	187

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Frans Sellers in upgets section DATE 8-30-47

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

8

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored X. Hole Diam. 44 in. Depth 73 ft.
   Curb material _____. Buried Slab: Yes X No _____
   b. Driven _____. Drive Pipe Diam. _____ in. Depth _____ ft.
   c. Drilled _____. Finished in Drift _____. In Rock _____.
   Tubular _____. Gravel Packed X.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building _____ Ft. Seepage Tile Field _____
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank _____ Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No _____
4. Date well completed June 27, 1979
5. Permanent Pump Installed? Yes X Date 7/79 - BY CUSTOMER
   Manufacturer Valley Type ½ HP Location well
   Capacity 12 gpm. Depth of Setting 52 Ft.
6. Well Top Sealed? Yes X No _____ Type _____
7. Pitless Adapter Installed? Yes X No _____
   Manufacturer Baker Model Number _____
   How attached to casing? Clamp
8. Well Disinfected? Yes _____ No _____
9. Pump and Equipment Disinfected? Yes _____ No _____
10. Pressure Tank Size 42 gal. Type Well-x-Trol
    Location house
11. Water Sample Submitted? Yes _____ No _____

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Non - Responsive
    Driller Joseph R. Reynolds License No. 92-601
11. Permit No. 87194 Date June 27, 1979
12. Water from Glacial Drift (Formation) 13. County Macon
    at depth 40 to 73 ft.
    14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____
    Sec. 25
    Twp. 16N
    Rge. 1E
    Elev. _____

SHOW LOCATION IN SECTION PLAT
NE NW SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
10	Plastic	+1	-17
36	Concrete	-17	-60
24	Concrete	-60	-73

16. Size Hole below casing: _____ in.
17. Static level _____ ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	0-3'	
Hard Pan	20'	
Glacial Drift	38'	
Sand	42'	
Glacial Drift	55'	
Sand	60'	
Marl	73'	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Joseph R Reynolds DATE June 28, 1979

IDPH 4.065
1/74 – KNB-1